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just out of sympathy for the cormorants and herons, I suppose. Four-fifths of the gulls were plainly immature, and the rest may have been non-breeders, too. I saw no sign of their nesting anywhere on the sea.

After collecting a few specimens and taking some pictures, we left the Island at three-thirty, and proceeded on our arduous way towards the mainland, which we reached at dark. We had to tie up to a bush several hundred yards off shore, because of the shallowness, and waded to shore with our effects. Richardson and I caught a train the next morning, and returned to Mecca, leaving Donham to take care of his boat.

In the preceding account I have mentioned only the water birds met with on Salton Sea. The land birds found in the vicinity of Mecca will receive attention in another paper.

Berkeley, California.

A FEW SUMMER BIRDS OF LAKE CHELAN, WASHINGTON

By J. H. BOWLES

LAKE Chelan is situated in the north central part of the State of Washington, and extends east and west almost entirely across the northern end of Chelan County. At the western end of the lake is its main feeder, the Stehekin River, which flows directly out of the Cascade Mountains. At the eastern end is its outlet, the Chelan River, which flows thru a deep gorge into the Columbia River. As the Chelan River is only four miles in length, the lake may be said to connect the Cascade Mountains with the sandy wastes of the Columbia. Consequently a great variety of country is encountered, as the lake is fifty-two miles in length and four or five miles in width. At the eastern end one finds almost the typical sage brush desert region, altho its altitude of 1500 feet has sprinkled it with what are commonly called bull pines (*Pinus jeffreyi*). At the western end the foothills of the mountains are encountered, and consequently an entire change of physical surroundings. Sand and sage brush have long since been left behind, and instead of scattered pines we find walls of rock and forests of cedar, pine, hemlock and cottonwood.

Such a country as is above described must necessarily attract a wide variety of bird life, and this is indeed the case to a really astonishing degree. At times I have almost imagined that a part of my old New England hunting grounds must have suddenly extended over the 3000 miles that intervene; for I have sat listening to the well-remembered songs and call-notes of Red-eyed Vireos, Catbirds, Kingbirds, Olive-backed Thrushes and Redstarts, all announcing their presence at the same time. Intermingled, and almost in discord, so out of place did they seem, would be heard the songs of the Louisiana Tanager and Bullock Oriole, as well as many other notes of our typical far western bird life.

I shall not attempt to give a full list of the birds of the region, merely mentioning such as seem to me to be of unusual interest for one reason or another, more particularly the typical forms common to the eastern United States.

The dates upon which these notes were taken cover the time from June 10 to the 23rd, of the present year (1908), at which period it seems beyond any reasonable doubt that all of the birds noted were breeding.

Querquedula cyanoptera. Cinnamon Teal. Two pairs of these little ducks were to be found at the extreme west end of the lake during my entire stay. Neither nest was found, altho both were certainly there. This is by far the highest altitude at which I have noted these birds nesting; but both pairs were probably strays from the Columbia River.

Cypseloides niger. Black Swift. These swifts were very common at the west end of the lake, and might be seen in flocks of fifty or more at almost any time of day. As the mountains were approached they rapidly became rare, until at an altitude of a little over 2000 feet they were very seldom seen at all. No evidences of nesting sites were found, nor could I obtain any reliable reports that any had ever been found.

Aeronautes melanoleucus. White-throated Swift. Less common than the foregoing, but seen going into crevices near the east end of the lake in the inaccessible cliffs along the Columbia. One has no conception whatever of the rapidity of bird flight until he has seen one of these winged meteors travelling at full speed.

Stellula calliope. Calliope Hummingbird. Found at both ends of the lake, but near the west end in the vicinity of 1500 feet altitude these birds were extremely numerous. I found great difficulty in locating the nests, only one set of two fresh eggs being found. This was taken on June 12, my attention being attracted to it by the savage attack of the female upon a passing Western Robin.

Nucifraga columbiana. Clarke Crow. These most interesting birds were rather plentiful near the west end of the lake, where they seemed to prefer an altitude of a little over 1500 feet. Here on June 13 I located the only nest of the trip, which was disclosed to me by the parent birds carrying food to the young. It was about 150 feet up in a large bull pine, near the top where some disease of the foliage had caused an almost solid cluster four feet in diameter. As regards visiting the nest the old birds were extremely shy, never going to it if they knew I was in the vicinity. This was apparently not at all to the liking of the young ones, whose continuous cries of *charr* could be plainly heard from the ground. They sounded very much like half-grown crows. My presence did not seem to cause the adults any personal alarm whatever, and I spent considerable time watching them at only a few yards distance. They seemed to find an equal abundance of food in the trees and on the ground, but I was surprised to find them such expert and assiduous fly-catchers. Large beetles and a dull-colored miller were very abundant, and these the nutcrackers caught in mid-air with a speed and accuracy that was remarkable in such heavily built birds. It is probable that the above mentioned nesting record is most unusual, both as to date and altitude, for doubtless they usually nest much earlier in the season and higher up in the mountains.

Hesperiphona vespertina montana. Western Evening Grosbeak. While not precisely common, these handsome birds were to be seen every day in the vicinity of 2000 feet altitude. No nests were found, nor did the birds show any indications of nesting.

Spizella socialis arizonæ. Western Chipping Sparrow. This extremely common little bird deserves mention for the almost unlimited latitude of its distribution. It is to be found literally everywhere, rearing its young in the sun-baked sage bushes, the cool orchard trees of some irrigated garden, and again is found equally numerous on the fir-clad slopes of the mountains. Many a disappointment has met me at the end of a hard climb, only to find a sparrow's nest where I had hoped for some rare warbler. And this in the wildest mountains where the presence of a *socialis* seemed quite beyond belief.

Vireo olivaceus. Red-eyed Vireo. Not at all uncommon at both ends of the lake. This is the most abundant vireo of the region, outnumbering the Cassin (*Vireo s. cassinii*) in the lower foothills at the west, and the Western Warbler (*V. g. swainsonii*) at the eastern end of the lake. Their song sounded to me to be rather more spirited than that of the Red-eyes of my eastern coverts, but possibly a long association with *cassinii* may have warped my judgment.

Dendroica townsendi. Townsend Warbler. This handsome warbler was found only at the west end of the lake where it was by no means common and seemed to be confined mostly to the tallest trees. The only males seen or heard were all high up in the tops of the largest conifers, much as is the habit of the Hermit Warbler on the Pacific slope.

In the only two nests seen, both of June 20, I was so unfortunate as to find in each four newly hatched young. They were both placed about twelve feet up in small fir, one some five feet out on a limb, the other close against the main trunk. Both were saddled upon the limb, and not placed in a fork nor in a crotch.

The construction of both nests was identical, and entirely different from any of the descriptions that I have read. They were firmly built, rather bulky, and decidedly shallow for the nest of a warbler. The material used appeared to be mostly cedar bark, with a few slender fir twigs interwoven. Externally they were patched with a silvery flax-like plant fiber, while the lining seemed to be entirely of the stems of moss flowers. To an eastern collector it resembled an unusually bulky and considerably flattened nest of the Black-throated Green Warbler, lacking any signs of feathers, however, in its construction.

Both females remained on the nests until I was within a very short distance of them, then dropped straight to the ground and disappeared. They were extremely shy at first, but after an hour or two became sufficiently accustomed to my presence to return to the nests a few moments after being flushed. I did not hear any alarm notes, nor did the males appear at any time.

Setophaga ruticilla. American Redstart. Altho seen at both ends of the lake the Redstarts were not at all common, being very much less numerous than they are in the vicinity of Spokane, Washington. They haunted the alder thickets in the immediate vicinity of water, and were seen as high as 2000 feet altitude.

Galeoscoptes carolinensis. Catbird. The Catbirds could not be termed common, but wherever a good-sized tract of open, brushy land was to be found one was fairly certain to hear the delightful notes of this bird. Well up into the mountains the occasional clearings were sometimes tenanted by a pair of these birds, and a short search usually revealed the nest and eggs, the latter being invariably five in number.

Hylocichla ustulata swainsonii. Olive-backed Thrush. These birds divided honors with the Western Chipping Sparrows as to which should be the more numerous in the wooded country. They seem the latest to nest of all the birds in the altitudes below 4000 feet; for at the time of my departure on June 23 many nests were incomplete, while none of the nests found contained young. The song seemed to me considerably clearer than that of our Russet-backs on the Pacific slope; otherwise there was not much difference in their notes or habits.

Tacoma, Washington.